

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

Dirk Kempthorne, Governor Toni Hardesty, Director

April 28, 2006

#### Certified Mail No. 7005 1160 0000 1550 3437

Charles H. Ross Agrium Conda Phosphate Operations 3010 Conda Road Soda Springs, ID 83726

RE:

Facility ID No. 029-00003, Agrium, Soda Springs

Final PTC and Tier I Operating Permit Administrative Amendment, SPA Plant

Dear Mr. Ross:

The Department of Environmental Quality (DEQ) is issuing Final PTC No. P-040320 and amended Tier I Operating Permit No. TI-040321 for a modification to the Superphosphoric Acid Plant (SPA) at the Agrium Conda Phosphate Operations facility located near Soda Springs in accordance with IDAPA 58.01.01.209.05.c and 381, Rules for the Control of Air Pollution in Idaho. The Tier I permit has been administratively amended by DEQ as requested in your March 27, 2006, submittal. The Final PTC and the Amended Tier I permit are effective as of April 28, 2006. Please be aware these permits replace PTC No. 020-00003 issued on July 12, 2000, and Tier I Operating Permit No. TI-040308 issued on April 8, 2005, the terms and conditions of which shall no longer be in effect.

A representative of the Pocatello Regional Office will contact you regarding a meeting with DEQ to discuss the permit terms and requirements. DEQ recommends the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any operations staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to call Dan Pitman at the number below to address any questions or concerns you may have with the enclosed permits.

If you have questions regarding the amendment procedure or this notification, please contact Dan Pitman at (208) 373-0500 or Daniel.Pitman@deq.idaho.gov.

Sincerely,

Martin Bauer, Administrator

Marty Pauce

Air Quality Division

MB/DP/bf

Permit No. P-040320 and T1-040321

**Enclosures** 



## Air Quality TIER I OPERATING PERMIT

## State of Idaho Department of Environmental Quality

**PERMIT NO.:** T1-040321

**FACILITY ID NO.:** 029-00003

AQCR: 61

**CLASS:** 

SIC:

2874

ZONE:

12 **UTM COORDINATE (km):** 455.8, 4731.8

1. PERMITTEE

Nu-West Industries, Inc.; Agrium Conda Phosphate Operations

2. PROJECT

**Tier I Operating Permit** 

_		T		
3.	MAILING ADDRESS	CITY	STATE	ZIP
	3010 Conda Road	Soda Springs	ID	83276
4.	FACILITY CONTACT	TITLE	TELEPHONE	
1	Coleman Kavanagh	Environmental Supervisor	(208) 547-4381 ext	t. <b>26</b> 3
5.	RESPONSIBLE OFFICIAL	TITLE	TELEPHONE	
	Charles H. Ross	General Manager	(208) 547-4381	
6.	EXACT PLANT LOCATION		COUNTY	
	7 miles north of Soda Springs, 1.2 miles east of Highway 34		Caribou	

# 7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS

Phosphate-based fertilizer products

#### 8. PERMIT AUTHORITY

This Tier I operating permit is issued pursuant to Idaho Code §39-115 and the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.300 through 386. The permittee shall comply with the terms and conditions of this permit.

This permit incorporates all applicable terms and conditions of prior air quality permits issued by the Department of Environmental Quality (DEQ) for the permitted source, unless the permittee emits toxic pollutants subject to State-only requirements pursuant to IDAPA 58.01.01.210, and the permittee elects not to incorporate those terms and conditions into this operating permit.

The effective date of this permit is the date of signature by the DEQ on the cover page.

TON HARDESTY, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED:	October 28, 2002
DATE MODIFIED/AMENDED	April 28, 2006
DATE EXPIRES:	October 28, 2006

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# Acronyms, Units, And Chemical Nomenclature

AIRS Aerometric Information Retrieval System

AQCR Air Quality Control Region

ASTM American Society of Testing and Materials

CFR Code of Federal Regulations

CO carbon monoxide

DEQ Department Environmental Quality

dscf dry standard cubic feet

EPA U.S. Environmental Protection Agency

gpm gallons per minute

gr grain (1 lb = 7,000 grains)

gr/dscf grains per dry standard cubic foot

HAPs hazardous air pollutants

IDAPA a numbering designation for all administrative rules in Idaho promulgated in

accordance with the Idaho Administrative Procedures Act

km kilometer

ib/hr pound per hour

MACT Maximum Available Control Technology

MMBtu/hr million British thermal units per hour

NESHAP Nation Emission Standards for Hazardous Air Pollutants

NO<sub>x</sub> nitrogen oxides

NSPS New Source Performance Standards

O&M operations and maintenance P<sub>2</sub>O<sub>5</sub> phosphorous pentoxide

PM particulate matter

PM<sub>10</sub> particulate matter with an aerodynamic diameter of 10 micrometers or less

ppm parts per million
PTC permit to construct
PW process weight

RMP Risk Management Plan

SIC Standard Industrial Classification

scf standard cubic feet

SIP State Implementation Plan

SO<sub>2</sub> sulfur dioxide T/yr tons per year

U.S.C. United States Code

VOC volatile organic compound

AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-040321						
Permittee:	Nu-West; Agrium	Facility ID No.	Date Issued:	October 28, 2002		
Location:	Soda Springs, ID	029-00003	Date Modified/Amended:	April 28, 2006		
LUCATION.	ooda oprings, io		Date Expires:	October 28, 2006		

#### TIER I OPERATING PERMIT SCOPE

## **Purpose**

- A.1 This Tier I operating permit establishes facility-wide requirements in accordance with the Idaho State Implementation Plan control strategy and the Rules.
- A.2 This Tier I permit incorporates the following permit(s):
  - PTC No. 029-00003, issued July 7, 1995
  - PTC No. 029-00003, issued August 14, 1996
  - PTC No. P-040307, issued December 10, 2004
  - PTC No. P-040320, issued April 28, 2006
- A.3 This Tier I renewal/modification/revision/amendment supersedes the following permit(s):
  - Tier I No. T1-040308, issued April 8, 2005

# **Regulated Sources**

A.4 Table A.1 lists all sources of emissions regulated in this Tier I operating permit.

Table A.1 REGULATED SOURCES

Permit Section	Source Description	Emissions Control(s)
2	Granulation Plant	A-Fa-1aVenturi Scrubber (wet, Phosphoric Acid) A-Fa-1b Spray tower scrubber (water)
2	Granulation Plant	A-Fa-2aMultiple Cyclone (dry) A-Fa-2b Venturi Scrubber (wet, Phosphoric Acid)
2	Granulation Plant	A-Fa-3 Baghouse
3	Dry product transfer	Enclosure
3	Dry product storage	Enclosure
3	Dry product loadout	Chemical dust suppressant
4	East Sulfuric Acid Plant	Dual absorption contact process
5	Nebraska boiler (B-5)	Low NO <sub>x</sub> package boiler
6	Phosphoric acid process	Multi-stage horizontal cross-flow scrubber (A-Pa-1)
6	Superphosphoric acid process	Multi-stage horizontal cross-flow scrubber (A-Pb-1)
6	Purified phosphoric acid process	Sulfiding vent scrubber (A-Pp-1) Filter aid silo baghouse (A-Pp-2) Conditioning vent scrubber (A-Pp-3)
6	Thermal fluid heaters	S-Pa-2a is equipped to control O2 in combustion air
8	Cleaver-Brooks boiler	Low-NO <sub>x</sub> package boiler

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T a sadiana	Sada Springa ID		Date Modified/Amended:	April 28, 2006			
Location:	Soda Springs, ID	023 0000	Date Expires:	October 28, 2006			

# 1. FACILITY-WIDE CONDITIONS

The following requirements apply generally to emissions units at the facility.

Table 1.1 FACILITY-WIDE APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Monitoring and Record-keeping Requirements
1.1	Fugitive emissions	Reasonable precautions	IDAPA 58.01.01.650-651	1.2, 1.3, 1.4, 1.11
1.5	Odorous gases, liquids, or solids	No emissions that cause air pollution	IDAPA 58.01.01.775-776	1.6, 1.11
1.7	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11
1.9	Excess emissions	Compliance with IDAPA 58.01.01.130- 136	IDAPA 58.01.01.130	1.9-1.9.5, 1.11
1.12	Open burning	In accordance with IDAPA 58.01.01.600-616	IDAPA 58.01.01.600-616	1.11
1.13	Asbestos	Compliance with 40 CFR 61, Subpart M	40 CFR 61, Subpart M	1.11, 1.13
1.14	Accidental release prevention	Compliance with 40 CFR 68.215(a)(2)	40 CFR 68.10(a)	1.11, 1.14
1.15	PM <sub>10</sub> , PM, NO <sub>X</sub> , SO <sub>2</sub> , CO, VOC, opacity	Test methods	IDAPA 58.01.01.157	1.11, 1.16
1.17	Fuel-burning equipment PM standard	Grain-loading	IDAPA 58.01.01.676-677	1.17.1, 1.11
1.18, 1.19	Fuel sulfur content	Fuel Oil ASTM grade No. 1 – 0.3% by weight ASTM grade No. 2 – 0.5% by weight Coal 1% by weight	IDAPA 58.01.01.728 and 729	1.11, 1.20
1.21	Recycling and emissions reduction	Reduce emissions of Class I and Class II refrigerants in accordance with 40 CFR 82, Subpart F	40 CFR 82, Subpart F	1.11, 1.21
1.22	Fugitive dust emissions	Visible emissions at property boundary not to exceed 3 minutes in any 60-minute period	PTC No. 029-00003; Permit Condition 1.2, 7/12/02	1.2, 1.3, 1.4, 1.11
1.23	Fluoride emissions	0.3 pounds fluoride per ton P <sub>2</sub> O <sub>5</sub> input	IDAPA 58.01.01.75, 5/01/94	1.24
1.25	Operation of ambient monitors	Operate 2 PM <sub>10</sub> and 1 SO <sub>2</sub> monitors	Consent Order, Condition 10, 10/24/73	1.11

# **Fugitive Emissions**

1.1 All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650, 651, 5/1/94]

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Location.	ooda Springs, 1D		Date Expires:	October 28, 2006		

1.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

1.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

The permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions, to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each monthly fugitive emission inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

#### **Odors**

1.5 No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776, 5/1/94]

The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07 (state-only), 5/1/94]

#### Visible Emissions

1.7 No person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

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LOCATION.	Soua Springs, 1D		Date Expires:	October 28, 2006				

1.8 In addition to the specific requirements in Permit Conditions 4.8.3 and 7.8.2, the permittee shall conduct a monthly facility-wide visible emission inspection of potential sources of visible emissions during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

#### **Excess Emissions**

- 1.9 In addition to the specific requirements in Permit Conditions 2.17.2, 5.22.2, and 6.28.2, the permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between Permit Condition 1.9 and the regulations of IDAPA 58.01.01.130-136.
- 1.9.1 The person responsible for or in charge of a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing such excess emissions event, to reduce the frequency of occurrence of such events, to minimize the amount by which the emission standard is exceeded, and shall, as provided below or upon request of DEQ, submit a full report of such occurrence including a statement of all known causes and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

In all cases where startup, shutdown, or scheduled maintenance of any equipment or emission unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to:

[IDAPA 58.01.01.133, 4/5/00]

 A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory and/or a Wood Stove Curtailment Advisory has been declared by DEQ; and

[IDAPA 58.01.01.133.01.a, 3/20/97]

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Ziotation.	ooda oprings, iD		Date Expires:	October 28, 2006	

Notifying DEQ of the excess emissions event as soon as reasonably possible, but no later than two
hours prior to the start of the excess emission event unless the owner or operator demonstrates to
DEQ's satisfaction that a shorter advanced notice was necessary.

[IDAPA 58.01.01.133.01.b, 4/5/00]

• The owner or operator of a source of excess emissions shall report and record the information required pursuant to Permit Conditions 1.9.4 and 1.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.c, 3/20/97]

1.9.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/5/00]

1.9.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures which cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

The owner or operator shall immediately undertake all appropriate measures to reduce and, to the
extent possible, eliminate excess emissions resulting from the event and to minimize the impact of
such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

• The owner or operator shall notify DEQ of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the owner or operator demonstrates to DEQ's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

• The owner or operator shall report and record the information required pursuant to Permit Conditions 1.9.4 and 1.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

1.9.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, DEQ may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the excess emissions until such time as the condition causing the excess emissions has been corrected or brought under control. Such action by DEQ shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03 4/5/00]

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Docution:	Sour Springs, 1D		Date Expires:	October 28, 2006			

1.9.4 A written report for each excess emissions event shall be submitted to DEQ by the owner or operator no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01, 3/20/97; IDAPA 58.01.01.135.02, 4/5/00]

1.9.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to DEQ upon request. The excess emissions records shall include the information requested by IDAPA 58.01.01.136.03(a) and (b) as summarized in the following:

[IDAPA 58.01.01.136.01, 02, 3/20/97; IDAPA 58.01.01.136.03, 4/5/00]

An excess emissions record book for each emissions unit or piece of equipment containing copies
of all reports that have been submitted to DEQ pursuant to IDAPA 58.01.01.135 for the particular
emissions unit or equipment; and

[IDAPA 58.01.01.136.03.a, 4/5/00]

 Copies of all startup, shutdown, and scheduled maintenance procedures and upset, breakdown, or safety preventative maintenance plans which have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97; IDAPA 58.01.01.130-136, 4/5/00 (state-only, federally-enforceable upon approval into the SIP); IDAPA 58.01.01.322.08.b, 3/23/98]

#### Reports and Certifications

1.10 All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136.

Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance Department of Environmental Quality Pocatello Regional Office 444 Hospital Way, #300 Pocatello, ID 83201

Phone: (208) 236-6160

Fax: (208) 236-6168

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10 Air Operating Permits, OAQ-107 1200 Sixth Ave. Seattle, WA 98101

[IDAPA 58.01.01.322.08, 11, 5/1/94]

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Location.	Soua Springs, 1D		Date Expires:	October 28, 2006			

# Monitoring and Recordkeeping

The permittee shall maintain sufficient recordkeeping to assure compliance with all of the terms and conditions of this operating permit. Recording of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

The permittee is not required to conduct the monitoring and associated recordkeeping for any emission unit if the emissions unit did not operate at any time between required monitoring events, provided the following conditions are met:

- The permittee makes a contemporaneous record in the log or file maintained on site of the date and time that the emission unit ceased operation, and the reason why the emission unit did not operate.
- The permittee makes a contemporaneous record in a log or file maintained on site of the date and time that the emission unit resumed operation.

[IDAPA 58.01.01.322.07, 5/1/94]

# Open Burning

1.12 The permittee shall comply with the requirements of IDAPA 58.01.01.600-616, Rules for Control of Open Burning.

[IDAPA 58.01.01.600-616, 5/1/94]

#### Renovation/Demolition

1.13 The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

# Regulated Substances for Accidental Release Prevention

1.14 This facility is subject to Part 68 and shall certify compliance with all requirements of 40 CFR 68, including the registration and submission of the RMP, as part of the annual compliance certification required by 40 CFR 70.6(c)(5).

[40 CFR 68.215(a)(2); IDAPA 58.01.01.322.11, 5/1/94; 40 CFR 68.215(a)(ii)]

## **Test Methods**

1.15 If testing is required, the permittee shall use the following test methods described in Table 1.2 to measure the pollutant emissions.

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Location. Soda Springs, 112			Date Expires:	October 28, 2006	

**Table 1.2 EPA REFERENCE TEST METHODS** 

Pollutants	Test Method*	Special Conditions
PM <sub>10</sub>	EPA Method 201.a EPA Method 202	
PM	EPA Method 5	
NO <sub>X</sub>	EPA Method 7	
SO <sub>2</sub>	EPA Method 6	
CO	EPA Method 10	
VOC	EPA Method 25	
Opacity	EPA Method 9	If an NSPS source, IDAPA 58.01.01.625 and Method 9; otherwise, IDAPA 58.01.01.625 only.

\*Or DEQ-approved alternative in accordance with IDAPA 58.01.01.157

## Compliance Testing

1.16 If testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any compliance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of test method to be used
- · Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

Within 30 days following the date in which a compliance test required by this permit is concluded, the permittee shall submit to DEQ a compliance test report for the respective test. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to:

Air Quality Permit Compliance Department of Environmental Quality Pocatello Regional Office 444 Hospital Way, # 300 Pocatello, ID 83201

Phone: (208) 236-6160 Fax: (208) 236-6168

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09. 5/1/94]

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# Fuel-burning Equipment

- 1.17 The permittee shall not discharge to the atmosphere from any fuel-burning equipment particulate matter in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas.

  [IDAPA 58.01.01.676-677, 5/1/94]
- 1.17.1 The boilers and heaters not listed as insignificant emission units (Section 9) shall be fired on natural gas exclusively.

[IDAPA 58.01.01.322.01, 3/19/99]

#### Sulfur Content

- 1.18 No person shall sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:
  - ASTM Grade 1 fuel oil 0.3% by weight.
  - ASTM Grade 2 fuel oil 0.5% by weight.

[IDAPA 58.01.01.728, 5/1/94]

1.19 No person shall sell, distribute, use or make available for use, any coal containing greater than 1% sulfur by weight.

[IDAPA 58.01.01.729, 5/1/94]

1.20 The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content and coal sulfur content on an as-received basis.

[IDAPA 58.01.01.322.01, 3/19/99]

# Recycling and Emissions Reductions

1.21 The permittee shall comply with applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

# Fugitive Dust Emissions

1.22 Fugitive emissions shall not be observed leaving the property for a period or periods aggregating more than three minutes in any 60-minute period. Fugitive visible emissions shall be determined by EPA Reference Method 22, as described in 40 CFR 60, Appendix A, or by a DEQ-approved alternative method.

[PTC No. P-040320, April 28, 2006]

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## Rules for Control of Fluoride Emissions

1.23 No person shall allow, suffer, cause or permit the discharge into the atmosphere of total fluoride emissions in gaseous and in particulate form, expressed as fluoride (F-) from the phosphate fertilizer plant sources in Permit Sections 2 and 6 in excess of 0.3 pounds of fluoride per ton of P<sub>2</sub>O<sub>5</sub> input to the phosphate fertilizer plant, calculated at maximum-rated capacity.

[IDAPA 58.01.01.751.01, 5/1/94]

## Monitoring, Testing, and Reporting Requirements

1.24 Compliance with IDAPA 58.01.01.751.01 will be adjudged upon the results of the continuing program of fluoride sampling of potential grazing areas and alfalfa-growing areas conducted by DEQ. Sampling conducted by any person subject to IDAPA 58.01.01.751 may be accepted for determining compliance with IDAPA 58.01.01.751.01 if such sampling is conducted at sites approved by DEQ in advance of sampling, using analytical procedures appearing in the Procedures Manual for Air Pollution Control, Section I (Source Test Methods) or equivalent methods approved by DEQ in advance of sampling. Compliance with IDAPA 58.01.01.751.01 shall be demonstrated by testing methods approved in advance by DEQ. When approved by the Director in advance of sampling, engineering calculations may be submitted in lieu of emission data. Monitoring and reporting requirements shall be included in operating permits granted to each facility.

[IDAPA 58.01.01.751.02, 5/1/94]

# **Operation of Ambient Monitors**

1.25 The permittee shall operate two PM<sub>10</sub> monitors and one continuous ambient SO<sub>2</sub> monitor at sites approved by DEQ. Results of the above described monitoring shall be submitted to DEQ monthly.

[Consent Order, Condition 10, 10/24/73]

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#### 2. GRANULATION PLANT

# **Summary Description**

The following is a narrative description of the dry fertilizer granulation plant regulated in this Tier I operating permit. This description is for informational purposes only.

The granulation plant produces two different grades of dry products. Phosphoric acid from the phosphoric acid plant and ammonia, which is purchased from outside the plant, are the primary raw materials. The basic reaction involved in the different products is the neutralization of the phosphoric acid by the ammonia. This generates a large quantity of heat and is responsible for the steam plume which may be seen exiting the Granulation stack.

At various points in the process, dust, fluorine fumes, or ammonia fumes are generated. A series of scrubbers are used to remove these fumes from the air exiting the plant. Phosphoric acid and water are used as the scrubbing media.

Table 2.1 below describes the devices used to control emissions from the granulation plant.

Table 2.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device		Emission Point
S-Fa-1		A-Fa-1a A-Fa-1b	Venturi Scrubber (wet, Phosphoric Acid) Spray tower scrubber (water)	P-Fa-1/2 (Sources Fa-1 and Fa-2 have a
S-Fa-2	granulation plant	A-Fa-2a A-Fa-2b	Multiple Cyclone (dry) Venturi Scrubber (wet, Phosphoric Acid)	common exhaust)
S-Fa-3		A-Fa-3	Baghouse	P-Fa-3

Table 2.2 contains only a summary of the requirements that apply to the granulation plant. Specific permit requirements are listed below Table 2.2.

Table 2.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating, Monitoring, and Recordkeeping Requirements
2.1	Fluoride emissions	0.058 lb/ton equivalent P <sub>2</sub> O <sub>5</sub> feed	40 CFR 63.622 <sup>(1)</sup>	2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.11, 2.12, 2.13, 2.15, 2.17, 2.18, 2.19, 2.20, 2.21, 2.22
2.2	Particulate matter	Process weight limitations	IDAPA 58.01.01.701	2.5, 2.9, 2.14, 2.16

If any requirement in this permit conflicts with any requirement contained in 40 CFR 63 the requirement in 40 CFR 63 shall control.

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## Permit Limits / Standard Summary

#### 2.1 Fluoride - Diammonium and/or Monoammonium Phosphate Process Line

On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.626 is completed, no owner or operator subject to the provisions of 40 CFR 63, Subpart BB shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 29.0 grams/metric ton of equivalent P<sub>2</sub>O<sub>5</sub> feed (0.0580 lb/ton).

[40 CFR 63.623(a); PTC No. P-040320, April 28, 2006]

#### 2.2 PM - Process Weight Rate Limitations

No person shall emit into the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 9,250 lb/hr,

$$E = 0.045(PW)^{0.6}$$

b. If PW is equal to or greater than 9,250 lb/hr,

$$E = 1.10(PW)^{0.25}$$

[IDAPA58.01.01.701, 4/5/00]

# **Operating Requirements**

#### 2.3 Pressure Drops and Flow Rates for Wet Scrubbers

On or after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.626 is required to be completed, the owner/operator using a wet scrubbing emission control system must maintain daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant to the requirements of 40 CFR 63.625(f)(1) or (2).

[40 CFR 63.624; PTC No. P-040320, April 28, 2006]

# Monitoring & Recordkeeping Requirements

#### 2.4 Throughput Monitoring Systems

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line subject to the provisions of 40 CFR 63, Subpart BB shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of  $\pm 5\%$  over its operating range.

[40 CFR 63.625(a); PTC No. P-040320, April 28, 2006]

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#### 2.5 P<sub>2</sub>O<sub>5</sub> Throughput

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line subject to the provisions of 40 CFR 63, Subpart BB shall maintain a daily record of equivalent  $P_2O_5$  feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flow rate which meets the requirements of 40 CFR 63.625(a) and then by proceeding according to 40 CFR 63.626(c)(3) (Permit Condition 2.13.1(3)).

[40 CFR 63.625(b); PTC No. P-040320, April 28, 2006]

#### 2.6 Pressure Drop Across Each Scrubber

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ±5% over its operating range.

[40 CFR 63.625(c)(1); PTC No. P-040320, April 28, 2006]

## 2.7 Liquid Flow Rate of Each Scrubber

Each owner or operator of a new or existing Diammonium and/or Monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5\%$  over its operating range.

[40 CFR 63.625(c)(2); PTC No. P-040320, April 28, 2006]

#### 2.8 Scrubber Pressure Drop and Liquid Flow Rate Ranges

Following the date on which the performance test required in 40 CFR 63.626 is completed, the owner or operator of a new or existing affected source using a wet scrubbing emission control system and subject to emissions limitations for total fluorides or particulate matter contained in 40 CFR 63, Subpart BB must establish allowable ranges for operating parameters using the methodology specified in either 2.8.1 or 2.8.2.

2.8.1 The allowable range for the daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is ±20% of the baseline average value determined as a requirement of 40 CFR 63.626(c)(4) or (d)(4). The Administrator retains the right to reduce the ±20% adjustment to the baseline average values of operating ranges in those instances where performance test results indicate that a source's level of emissions is near the value of an applicable emissions standard, but in no instance shall the adjustment be reduced to less than #10%. The owner or operator must notify the Administrator of the baseline average value and must notify the Administrator each time that the baseline value is changed as a result of the most

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recent performance test. When a source using the methodology of this paragraph is retested, the owner or operator shall determine whether new allowable ranges of baseline average values will be based upon the new performance test or (if the new performance test results are within the previously established range) whether there will be no change in the operating parameters derived from previous tests. When a source using the methodology of this paragraph is retested and the performance test results are submitted to the Administrator pursuant to 40 CFR 63.627(c)(1), 63.7(g)(1), and/or 63.10(d)(2), the owner or operator will indicate whether the operating range will be based on the new performance test or the previously established range. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

2.8.2 The owner or operator of any new or existing affected source shall establish, and provide to the Administrator for approval, allowable ranges for the daily averages of the pressure drop across and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of assuring compliance with 40 CFR 63, Subpart BB, Allowable ranges may be based upon baseline average values recorded during previous performance tests using the test methods required in 40 CFR 63.626(c)(4) or (d)(4). As an alternative, the owner or operator can establish the allowable ranges using the results of performance tests conducted specifically for the purposes of this paragraph using the test methods required in 40 CFR 63, Subpart BB and established in the manner required in 40 CFR 63.626(c)(4) or (d)(4). The source shall certify that the control devices and processes have not been modified subsequent to the testing upon which the data used to establish the allowable ranges were obtained. The allowable ranges developed pursuant to the provisions of this paragraph must be submitted to the Administrator for approval. The owner or operator must request and obtain approval of the Administrator for changes to the allowable ranges. When a source using the methodology of this paragraph is retested, the owner or operator shall determine new allowable ranges of baseline average values unless the retest indicates no change in the operating parameters outside the previously established ranges. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

[40 CFR 63.625(f); PTC No. P-040320, April 28, 2006]

#### 2.9 <u>Urea Storage Baghouse Pressure Drop</u>

- 2.9.1 The permittee shall install, calibrate, maintain, and operate, in accordance with manufacturer specifications, equipment to continuously measure the pressure differential across the baghouse.
- 2.9.2 The pressure drop across the baghouse shall be maintained within the manufacturer and Operation & Maintenance (O&M) manual specifications when it is operated. Documentation of both the manufacturer's and O&M manual operating pressure drop specifications shall remain onsite at all times and shall be available to DEO representatives upon request.
- 2.9.3 The permittee shall monitor and record the pressure drop across the baghouse on a weekly basis when it is operated.

[PTC No. P-040320, April 28, 2006]

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#### 2.10 Performance Testing for Existing Units

On or before the applicable compliance date in 40 CFR 63.630 and once per annum thereafter, each owner or operator of a phosphate fertilizers production plant subject to the provisions of 40 CFR 63, Subpart BB shall conduct a performance test to demonstrate compliance with the applicable emission standard for each existing diammonium and/or monoammonium phosphate process line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A, and in 40 CFR 63.626.

[40 CFR 63.626(a)(1); PTC No. P-040320, April 28, 2006]

## 2.11 Performance Testing for New Units

As required by 40 CFR 63.7(a)(2) and once per annum thereafter, each owner or operator of a phosphate fertilizer production plant subject to the provisions of 40 CFR 63, Subpart BB shall conduct a performance test to demonstrate compliance with the applicable emission standard for each new diammonium and/or monoammonium phosphate process line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A and in 40 CFR 63.626.

[40 CFR 63.626(a)(2); PTC No. P-040320, April 28, 2006]

#### 2.12 Performance Test Methods

In conducting performance tests, each owner or operator of an affected source shall use as reference methods and procedures the test methods in 40 CFR 60, Appendix A, or other methods and procedures as specified in 40 CFR 63.626, except as provided in 40 CFR 63.7(f).

[40 CFR 63.626(b); PTC No. P-040320, April 28, 2006]

## 2.13 <u>Performance Testing - Fluorides</u>

Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line shall determine compliance with the applicable total fluorides standards in 40 CFR 63.622 or 63.623, as specified in 2.13.1.

2.13.1 (1) The emission rate (E) of total fluorides shall be computed for each run using the following equation:

$$E = \left(\sum_{i=1}^{N} C_{si} Q_{sdi}\right) / (PK)$$

Where:

E = emission rate of total fluorides, g/metric ton (lb/ton) of equivalent  $P_2O_5$  feed.

 $C_{si}$  = concentration of total fluorides from emission point "i," mg/dscm (mg/dscf).

Q<sub>sdi</sub> = volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).

N = number of emission points associated with the affected facility.

 $P = \text{equivalent } P_2O_5 \text{ feed rate, metric ton/hr (ton/hr)}.$ 

K = conversion factor, 1000 mg/g (453,600 mg/lb).

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- (2) Method 13A or 13B (40 CFR 60, Appendix A) shall be used to determine the total fluorides concentration (C<sub>si</sub>) and volumetric flow rate (Q<sub>sdi</sub>) of the effluent gas from each of the emission points. If Method 13 B is used, the fusion of the filtered material described in Permit Condition 7.3.1.2 and the distillation of suitable aliquots of containers 1 and 2, described in Permit Conditions 7.3.3 and 7.3.4 in Method 13 A, may be omitted. The sampling time and sample volume for each run shall be at least one hour and 0.85 dscm (30 dscf).
- (3) The equivalent P<sub>2</sub>O<sub>5</sub> feed rate (P) shall be computed using the following equation:

$$P = M_p R_p$$

#### Where:

 $M_p$  = total mass flow rate of phosphorus-bearing feed, metric ton/hr (ton/hr).  $R_p = P_2O_5$  content, decimal fraction.

- (i) The accountability system described in 40 CFR 63.625(a) and (b) shall be used to determine the mass flow rate  $(M_v)$  of the phosphorus-bearing feed.
- (ii) The P<sub>2</sub>O<sub>5</sub> content (R<sub>p</sub>) of the feed shall be determined using as appropriate the following methods (incorporated by reference -- see 40 CFR 63.14) specified in the Book of Methods Used and Adopted By The Association Of Florida Phosphate Chemists, Seventh Edition 1991, where applicable:
  - (A) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample.
  - (B) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus -- P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method A Volumetric Method.
  - (C) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method B Gravimetric Quimociac Method.
  - (D) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method C Spectrophotometric Method.
  - (E) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P<sub>2</sub>O<sub>5</sub>, Method A -Volumetric Method.
  - (F) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P<sub>2</sub>O<sub>5</sub>, Method B - Gravimetric Quimociac Method.
  - (G) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P<sub>2</sub>O<sub>5</sub>, Method C Spectrophotometric Method.
- (4) To comply with 40 CFR 63.625(f)(1) or (2), the owner or operator shall use the monitoring systems in 40 CFR 63.625(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the total fluoride runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of 40 CFR 63.625(f)(1) or (2).

[40 CFR 63.626(c); PTC No. P-040320, April 28, 2006]

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#### 2.14 Operations and Maintenance Manual Requirements

Within 60 days after startup, the permittee shall have developed an O&M manual for the Urea Storage Baghouse, which describes the procedures that will be followed to comply with Permit Condition 2.23 and the air pollution control device requirements contained in this permit. The manual shall remain onsite at all times and shall be available to DEQ representatives upon request.

[PTC No. P-040320, April 28, 2006]

2.15 Each owner or operator subject to the requirements of 40 CFR 63, Subpart BB shall comply with the recordkeeping requirements in 40 CFR 63.10. Requirements are included in Appendix A of this permit.

[40 CFR 63.627(b)]

#### 2.16 Performance Test - Particulate Matter

The permittee shall conduct a compliance test on P-Fa-1/2, and P-Fa-3 in accordance with the procedures outlined in 40 CFR 60, Appendix A, Method 5, or a DEQ-approved alternative method, within 180 days of issuance of the permit.

If the particulate matter emission rate measured in the initial compliance test is less than or equal to 75% of the emission standard in Permit Condition 2.2, no further testing shall be required during the permit term. The process weight measured during the compliance test shall be PW in the equation. If the particulate matter emission rate measured during the compliance test is greater than 75%, but less than or equal to 90%, of the emission standard in Permit Condition 2.2, a second test shall be required in the third year of the permit term. If the particulate matter emission rate measured during the compliance test is greater than 90% of the emission standard in Permit Condition 2.2, the permittee shall conduct a compliance test annually.

[IDAPA 58.01.01.322.09, 5/1/94]

#### Reporting

#### 2.17 <u>Maximum Achievable Control Technology Performance Test Report</u>

In accordance with 40 CFR 63.627(c), the owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 as follows:

[40 CFR 63.627(c); PTC No. P-040320, April 28, 2006]

#### 2.17.1 Performance Test Report

As required by 40 CFR 63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in 40 CFR 63.9.

[40 CFR 63.627(c)(1)]

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## 2.17.2 <u>Excess Emissions Report</u>

As required by 40 CFR 63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in 40 CFR 63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved, as described in 40 CFR 63.10.

[40 CFR 63.627(c)(2)]

## 2.17.3 Summary Report

If the total duration of control system exceedances for the reporting period is less than 1% of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in 40 CFR 63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.

[40 CFR 63.627(c)(3)]

2.17.4 If the total duration of control system operating parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

[40 CFR 63.627(c)(4)]

2.18 Each owner or operator subject to the requirements of 40 CFR 63, Subpart BB shall comply with notification requirements in 40 CFR 63.9. Requirements are included in Appendix A of this permit.

[40 CFR 63.627(a)]

## Phosphate Fertilizers Production Plant MACT Compliance Dates

2.19 Each owner or operator of an existing affected source at a phosphate fertilizers production plant shall achieve compliance with the requirements of 40 CFR 63, Subpart BB no later than June 10, 2002. Notwithstanding the requirements of 40 CFR 63.7(a)(2)(iii), each owner or operator of an existing affected source at a phosphate fertilizers production plant shall fulfill the applicable requirements of 40 CFR 63.626 no later than June 10, 2002.

[40 CFR 63.630(a)]

2.20 Each owner or operator of a phosphate fertilizers production plant that commences construction or reconstruction of an affected source after December 27, 1996 shall achieve compliance with the requirements of 40 CFR 63, Subpart BB upon startup of operations or by June 10, 1999, whichever is later.

[40 CFR 63.630(b)]

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# Phosphate Fertilizers Production Plant Exemption From New Source Performance Standards

Any affected source subject to the provisions of 40 CFR 63, Subpart BB is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart V, Subpart W, or Subpart X. To be exempt, a source must have a current operating permit pursuant to Title V of the Act and the source must be in compliance with all requirements of 40 CFR 63, Subpart BB. For each affected source, this exemption is effective upon the date that the owner or operator demonstrates to the Administrator that the requirements of 40 CFR 63.624, 63.625 and 63.626 have been met.

[40 CFR 63.631]

# Applicability of MACT General Provisions

2.22 The owner or operator shall comply with the requirements of the general provisions in 40 CFR 63, Subpart A as shown in Appendix A to 40 CFR 63, Subpart BB. Requirements are included in Appendix A of this permit.

[40 CFR 63.628; PTC No. P-040320, April 28, 2006]

#### PTC General Provisions

2.23 The permittee shall at all times (except as provided in the *Rules*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC No. P-040320, General Provision 2, April 28, 2006]

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# 3. DRY PRODUCT TRANSFER, STORAGE, AND LOADOUT

# **Summary Description**

The following is a narrative description of the dry product transfer, storage, and loadout process regulated in this Tier I operating permit. This description is for informational purposes only.

Dry fertilizer from the granulation plant is conveyed to the shipping warehouse and stored until time to ship to customers. The warehouse holds approximately 60,000 tons of dry fertilizer products. Frontend loaders are used to transfer the product from the piles inside the warehouse to the feeders and conveyers. The fertilizer products are screened for size and loaded into railcars or trucks.

Table 3.1 describes the devices used to control dry product transfer, storage, and loadout.

Table 3.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device
F-Fb-1	Dry product transfer	Enclosure
F-Fb-2	Dry product storage	Enclosure
F-Fc-1	Dry product loadout	Chemical dust suppressant

Table 3.2 contains only a summary of the requirements that apply to the dry product transfer, storage, and loadout process. Specific permit requirements are listed below Table 3.2.

Table 3.2 APPLICABLE REQUIREMENTS SUMMARY

	Permit Condition	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Monitoring and Recordkeeping Requirements
١	3.1	Particulate matter	Process weight	IDAPA 58.01.01.702	None

# Permit Limits / Standard Summary

# 3.1 PM - Process Weight Rate Limitations

No person shall emit into the atmosphere from any process or process equipment operating prior to October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 17,000 lb/hr,

$$E = 0.045(PW)^{0.6}$$

b. If PW is equal to or greater than 17,000 lb/hr,

$$E = 1.12(PW)^{0.27}$$

[IDAPA 58.01.01.702, 4/5/00]

# Monitoring & Recordkeeping Requirements

None. The process is inherently in compliance. See the technical memorandum for explanation.

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#### 4. EAST SULFURIC ACID PLANT

# **Summary Description**

The following is a narrative description of the East Sulfuric Acid Plant regulated in this Tier I operating permit. This description is for informational purposes only.

Approximately 50% of the sulfuric acid utilized at the Agrium Conda Phosphate Plant is currently manufactured by Nu-West at the East Sulfuric Acid Plant using a dual absorption contact process that burns elemental sulfur. The other 50% of the sulfuric acid used at the facility is purchased from a third party source.

Table 4.1 describes the devices used to control emissions from East Sulfuric Acid Plant.

Table 4.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device
S-Se-I	East Sulfuric Acid Plant	Dual absorption contact process

Table 4.2 contains only a summary of the requirements that apply to the East Sulfuric Acid Plant. Specific permit requirements are listed below Table 4.2.

**Table 4.2 APPLICABLE REQUIREMENTS SUMMARY** 

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating, Monitoring and Recordkeeping Requirements
4.1	Sulfur dioxide emissions	4 pounds per ton of sulfuric acid production 258 lb/hr 945 T/yr 28 pounds per ton of 100% sulfuric acid production	40 CFR 60.82 <sup>(1)</sup> PTC No. P-040307 IDAPA 58.01.01.845	4.5 – 4.10 - 4.14
4.2	Sulfuric acid mist emissions	0.15 pounds per ton of sulfuric acid production	40 CFR 60.83	4.6, 4.10 - 4.13, 4.15
4.3	Visible emissions	10% opacity	40 CFR 60.83	4.6, 4.10 - 4.12

<sup>1</sup> If any requirement in this permit conflicts with any requirement contained in 40 CFR 60 the requirement in 40 CFR 60 shall control.

# Permit Limits / Standard Summary

# 4.1 Sulfur Dioxide Emissions from the East Sulfuric Acid Plant

4.1.1 Sulfur dioxide emissions shall not exceed four pounds per ton of 100% sulfuric acid production, as specified in 40 CFR 60.82(a). Compliance with this limit will also demonstrate compliance with the sulfur dioxide emission limit contained in IDAPA 58.01.01.845 (28 pounds SO<sub>2</sub> per ton of 100% sulfuric acid production).

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4.1.2 Sulfur dioxide emissions shall not exceed 258 lb/hr and 945 tons per any consecutive 12-month period (T/yr).

[40 CFR 60.82; IDAPA 58.01.01.845, 5/1/94; PTC No. P-040307, 12/10/04]

#### 4.2 Sulfuric Acid Mist Emissions from the East Sulfuric Acid Plant

Sulfuric acid mist emissions from the East Sulfuric Acid Plant shall not exceed 0.15 lb per ton of 100% sulfuric acid production, as specified in 40 CFR 60.83(a)(1).

[40 CFR 60.83; PTC No. P-040307, 12/10/04]

#### 4.3 <u>Visible Emission Limits</u>

Visible emission limits from the East Sulfuric Acid Plant shall not exceed 10% opacity as specified in 40 CFR 60.83(a)(2).

[40 CFR 60.83; PTC No. P-040307, 12/10/04]

#### 4.4 PM - Process Weight PM Emissions Limitations

No person shall emit into the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 9.250 lb/hr,

$$E = 0.045(PW)^{0.6}$$

b. If PW is equal to or greater than 9,250 lb/hr,

$$E = 1.10(PW)^{0.25}$$

[IDAPA 58.01.01.701, 4/5/00]

# **Operating Requirements**

#### 4.5 Production Rate Limit

The East Sulfuric Acid Plant shall have a maximum daily production rate of 1,550 tons per day.

[PTC No. P-040307, 12/10/04]

# Monitoring & Recordkeeping Requirements

#### 4.6 Performance Tests

- 4.6.1 Sulfur dioxide and sulfuric acid mist emission tests shall be performed during each 13-month period of the permit term using using EPA Reference Methods 1, 2, 3, and 8, or DEQ approved alternative methods. All emission tests shall be performed at the process equipment's maximum operating capacity.
- 4.6.2 Visible emissions shall be observed and recorded with the emissions test required in Permit Condition 4.6, using EPA Reference Method 9. A minimum of 24 observations shall be recorded.

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- 4.6.3 The maximum production following each emission test shall not exceed 105% of the rate achieved during the test unless the following conditions are met, and this rate shall not exceed 1550 tons per day:
- 4.6.3.1 The sulfur dioxide monitor is calibrated at least once every 24 hours using certified test gases, one of which has a sulfur dioxide concentration equal or less than the expected stack gas sulfur dioxide concentration, and one of which has a sulfur dioxide concentration greater than the expected stack gas sulfur dioxide concentration.
- 4.6.3.2 Prior written approval by DEQ is received.
- 4.6.3.3. An emission test is performed at the requested increased production rate, and the test demonstrates that the continuous emission monitor is accurate at the increased rate.
- 4.6.3.4 Sulfur dioxide and acid mist emission limits will not be violated at the requested increased production rate.

[PTC No. P-040307, 12/10/04]

## 4.7 **CEMS Requirement**

- 4.7.1 A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under 60.13(d), shall be sulfur dioxide (SO<sub>2</sub>). Method 8 shall be used for conducting monitoring system performance evaluations under 60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.
- 4.7.2 The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each 8-hour period as follows:

$$CF = k[(1.000 - 0.015r) / (r - s)]$$

where:

CF = conversion factor (kg/metric ton per ppm, lb/ton per ppm).

- k = constant derived from material balance. For determining CF in metric units, k = 0.0653. For determining CF in English units, k = 0.1306.
- r = percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.
- s = percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under Permit Condition 4.7.1.

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- 4.7.3 The owner or operator shall record all conversion factors and values under Permit Condition 4.7.2 from which they were computed (i.e., CF, r, and s).
- 4.7.4 Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO<sub>2</sub> emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO<sub>2</sub>, O<sub>2</sub>, and CO<sub>2</sub> (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO<sub>2</sub> monitor shall be as specified in paragraph (b) of this section. The span value for CO<sub>2</sub> (if required) shall be 10% and for O<sub>2</sub> shall be 20.9% (air). A conversion factor based on process rate data is not necessary. Calculate the SO<sub>2</sub> emission rate as follows:

$$Es = (C_s S)/[0.265 - (0.126 \%O_2) - (A \%CO_2)]$$

where:

Es = emission rate of SO<sub>2</sub>, kg/metric ton (lb/ ton) of 100% of H<sub>2</sub>SO<sub>4</sub> produced.

Cs = concentration of SO<sub>2</sub>, kg/dscm (lb/dscf).

S = acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100% H<sub>2</sub>SO<sub>4</sub> produced.

 $\% O_2$  = oxygen concentration, percent dry basis.

A = auxiliary fuel factor,

= 0.00 for no fuel.

= 0.0226 for methane.

= 0.0217 for natural gas.

= 0.0196 for propane.

= 0.0172 for No 2 oil.

= 0.0161 for No 6 oil.

= 0.0148 for coal.

= 0.0126 for coke.

%  $CO_2$  = carbon dioxide concentration, percent dry basis.

NOTE: It is necessary in some cases to convert measured concentration units to other units for these calculations. Use the following table for such conversions:

From	То	Multiply by
g/scm	kg/scm	10 <sup>-3</sup>
mg/scm	kg/scm	10 <sup>-6</sup>
ppm (SO <sub>2</sub> )	kg/scm	2.660 x 10 <sup>-6</sup>
ppm (SO <sub>2</sub> )	lb/scf	1.660 x 10 <sup>-7</sup>

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4.7.5 For the purpose of reports under 40 CFR 60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under 40 CFR 60.82.

[40 CFR 60.84; PTC No. P-040307, 12/10/04]

## 4.8 **Production Monitoring**

Each day, the permittee shall monitor and record the production of the East Sulfuric Acid Plant in tons/day.

[IDAPA 58.01.01.322.06, 5/1/94; PTC No. P-040307, 12/10/04]

## 4.9 SO<sub>2</sub> Hourly and Annual Emission Rate Monitoring

Using the CEMS required under Permit Condition 4.7, the Permittee shall monitor and record the SO<sub>2</sub> emissions from the East Sulfuric Acid Plant to demonstrate compliance with Permit Condition 4.1.2, as specified below:

- in pounds per hour; and
- in tons for each consecutive 12-month period;

[IDAPA 58.01.01.322.06, 5/1/94; PTC No. P-040307, 12/10/04]

#### 4.10 Test Methods and Procedures

- 4.10.1 In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in paragraph 4.10.3.
- 4.10.2 The owner or operator shall determine compliance with the SO<sub>2</sub>, acid mist, and visible emission standards in Permit Conditions 4.1, 4.2, and 4.3 (60.82 and 60.83) as follows:
  - (1) The emission rate (E) of acid mist or SO<sub>2</sub> shall be computed for each run using the following equation:

$$E = (CQ_{sd})/(PK)$$

where:

E = emission rate of acid mist or SO<sub>2</sub> kg/metric ton (lb/ton) of 100 % H<sub>2</sub>SO<sub>4</sub> produced.

 $C = \text{concentration of acid mist or SO}_2, \text{ g/dscm (lb/dscf)}.$ 

Q<sub>sd</sub> = volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P = production rate of 100 % H<sub>2</sub>SO<sub>4</sub>, metric ton/hr (ton/hr).

K = conversion factor, 1000 g/kg (1.0 lb/lb).

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- (2) Method 8 shall be used to determine the acid mist and  $SO_2$  concentrations (C's) and the volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).
- (3) Suitable methods shall be used to determine the production rate (P) of 100% H<sub>2</sub>SO<sub>4</sub> for each run. Material balance over the production system shall be used to confirm the production rate.
- (4) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.
- 4.10.3 The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:
  - (i) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:
  - (ii) The integrated technique of Method 3 is used to determine O<sub>2</sub> concentration and, if required, CO<sub>2</sub> concentration.
  - (iii) The SO<sub>2</sub> or acid mist emission rate is calculated as described in 40 CFR 60.84(d), substituting the acid mist concentration for C(s) as appropriate.

[40 CFR 60.85]

# Reporting

#### 4.11 <u>Performance Test Protocol</u>

The permittee shall submit for approval to DEQ a source test protocol for each test required by Permit Condition 4.6. The test protocol shall be submitted to DEQ no later than 30 days prior to the date of the initial performance test. Once DEQ approves the test protocol, the permittee shall conduct all subsequent source tests in accordance with the approved protocol. The permittee may submit a new test protocol for review and approval in the event that there is any change in the protocol. The new test protocol shall be approved by DEQ prior to any testing in accordance with the new protocol.

[PTC No. P-040307, 12/10/04]

#### 4.12 Performance Test Results

The data and results of all emissions tests shall be reported to DEQ within 30 days of the completion of the tests. The report shall also include continuous emission monitoring data, production rates, and visible emissions data.

[PTC No. P-040307, 12/10/04]

#### 4.13 Sulfur Dioxide Emissions Report

All three-hour running average sulfur dioxide emissions and quarterly emissions of sulfuric acid mist shall be reported to DEQ in a calendar-quarterly report. The quarterly emissions of sulfuric acid mist shall be calculated by using the most recent source test emission factor multiplied by the production rate. The report shall be received by DEQ no later than 30 days after each calendar quarter.

[PTC No. P-040307, 12/10/04]

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## 4.14 CEMS Report

All repairs or changes to the continuous emissions monitoring systems (CEMS) and any calibration problem shall be reported to DEQ within seven days and shall be included in the quarterly report.

[PTC No. P-040307, 12/10/04]

## PTC General Provisions

4.15 The permittee shall at all times (except as provided in the *Rules*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC No. P-040307, 12/10/04]

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# 5. NEBRASKA BOILER (B-5)

# **Summary Description**

The following is a narrative description of the B-5 Nebraska boiler regulated in this Tier I operating permit. This description is for informational purposes only.

The "B-5" gas-fired boiler generates steam for the production of phosphoric acid. The B-5 boiler must meet the following specifications, or be of equivalent design subject to DEQ approval:

Manufacturer:

Nebraska Boiler Company

Model Number:

NSX-G-107-ECON

Rated Heat Input:

213.8 MMBtu/hr

Steam Capacity: Fuel:

175,000 lb/hr Natural gas

Table 5.1 describes the devices used to control emissions from the Nebraska boiler.

Table 5. 1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES						
Source Code	Emission Unit(s) / Process(es)	Emission Control Device				
S-Nb-1	Nebraska boiler (B-5)	Low NO <sub>x</sub> package boiler				

Table 5.2 contains only a summary of the requirements that apply to the B-5 Nebraska boiler. Specific permit requirements are listed below Table 5.2.

Table 5.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating, Monitoring and Recordkeeping Requirements
5.1	Nitrogen oxide emissions	0.20 lb/MMBtu 16.84 lb/hr 70.71 T/yr	40 CFR 60.44b (1) PTC No. 029-00003, Permit Condition 2.2, 7/7/95	5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.20, 5.21, 5.22
5.2	Particulate matter emissions PM <sub>10</sub> emissions SO <sub>2</sub> emissions CO emissions VOC emissions	1.05 lb/hr, 4.42 T/yr 1.05 lb/hr, 4.42 T/yr 0.13 lb/hr, 0.53 T/yr 8.42 lb/hr, 35.4 T/yr 0.36 lb/hr, 1.50 T/yr	PTC No. 029-00003, Permit Condition 2.1, 7/7/95	5.5, 5.6, 5.12
5.3	Particulate matter	0.015 gr/dscf corrected to 3% oxygen	IDAPA 58.01.01.677	5.5

If any requirement in this permit conflicts with any requirement contained in 40 CFR 60 the requirement in 40 CFR 60 shall control.

# Permit Limits / Standard Summary

5.1 The NO<sub>x</sub> emissions from the B-5 boiler stack shall not exceed 0.20 lb/MMBtu in accordance with Permit Condition 5.1.1 and the NO<sub>x</sub> emission limits in Table 5.3.

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On and after the date the initial performance test is completed, or is required to be completed under 40 CFR 60.8 (whichever comes first), the permittee shall not cause any gases that contain nitrogen oxides (expressed as NO<sub>2</sub>) to be discharged into the atmosphere in excess of 0.10 pounds per million Btu (0.10 lb/MMBtu) heat input to the boiler at a low heat release rate (70,000 Btu/hr-ft³ or less), or in excess of 0.20 pounds per million Btu (0.20 lb/MMBtu) heat input to the boiler at a high heat release rate (greater than 70,000 Btu/hr-ft³).

[40 CFR 60.44b(a); PTC No. 029-00003, Section 2.2, 8/14/96]

5.1.2 Compliance with the emission limit in Permit Condition 5.1.1 is determined on a 30-day rolling average basis.

[40 CFR 60.44b(i)]

5.2 The PM, PM<sub>10</sub>, SO<sub>2</sub>, CO and VOC emissions from the B-5 boiler exhaust stack shall not exceed any corresponding emission limit listed in Table 5.3.

[PTC No. 029-00003, Section 2.1, 7/7/95]

**Table 5.3 EMISSION LIMITS** 

Source	F	PM	P	N <sub>10</sub>	S	0,	N	O <sub>x</sub>	V	oc _	С	O
Description	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
B-5 Boiler	1.05	4.42	1.05	4.42	0.13	0.53	16.84	70.71	0.36	1.50	8.42	35.4

5.3 The PM emissions shall not exceed the grain-loading emission limits of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for natural gas.

[IDAPA 58.01.01.677, 5/1/94]

# **Operating Requirements**

5.4 The boiler shall be equipped with a COEN low-NO<sub>x</sub> burner, or a DEQ-approved equivalent for the control of NO<sub>x</sub> emissions.

[PTC No. 029-00003, Section 1.2, 8/14/96]

5.5 The B-5 boiler shall only use natural gas as fuel.

[PTC No. 029-00003, Section 3.3, 7/7/95]

5.6 The B-5 boiler shall not burn more than 1,768,000,000 scf of natural gas fuel per year.

[PTC No. 029-00003, Section 3.4, 7/7/95]

# Monitoring & Recordkeeping Requirements

#### 5.7 NO, Performance Test

Compliance with the NO<sub>x</sub> emission standards under Permit Condition 5.1 (40 CFR 60.44b) of this permit shall be determined through performance testing under Permit Condition 5.8 or 5.9 (40 CFR 60.46b(e) or (g)). This performance test, and any subsequent performance tests conducted to demonstrate compliance with this permit, shall be performed in accordance with IDAPA 58.01.01.157.

[40 CFR 60.46b(c)]

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- To determine compliance with the emission limits for nitrogen oxides required under 40 CFR 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring nitrogen oxides under Permit Condition 5.10 (40 CFR 60.48(b)).
  - 1) In accordance with 40 CFR 60.46b(e)(4), following the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8 of 40 CFR 60, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 MMBtu/hr) or less and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the nitrogen oxides standards under 40 CFR 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emissions data collected pursuant to 40 CFR 60.48b(g)(1) or 40 CFR 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam-generating unit operating days.

[40 CFR 60.46b(e)]

5.9 The owner or operator of an affected facility described in 40 CFR 60.44b(j) or 40 CFR 60.44b(k) shall demonstrate the maximum heat input capacity of the steam-generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in Sections 5 and 7.3 of the American Society for Mechanical Engineers (ASME) Power Test Codes 4.1 (see IBR 40 CFR 60.17(h)). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of 40 CFR 60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of 40 CFR 60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

[40 CFR 60.46b(g)]

- 5.10 The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10% (0.10) shall:
  - (1) Comply with the provisions of 40 CFR 60.48b(b) through 40 CFR 60.48b(f), or
  - (2) Monitor steam-generating unit operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to Permit Condition 5.15.2 (40 CFR 60.49b(c)).

    [40 CFR 60.48b(g)]

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- 5.11 The permittee shall monitor and record the following data as specified in 40 CFR 60.49b(g):
- 5.11.1 Calendar date.
- 5.11.2 The average hourly NO<sub>x</sub> emission rates in lb/MMBtu and lb/hr.
- 5.11.3 The 30-day average NO<sub>x</sub> emission rates calculated at the end of each operating day from measured or predicted hourly NO<sub>x</sub> emission rates for the preceding 30 operating days.
- 5.11.4 Identification of boiler operating days when the average 30-day NO<sub>x</sub> emission rates exceed the standard, with an explanation of the cause of the exceedance and the corrective action taken to remedy the cause of the exceedance.
- 5.11.5 Identification of the boiler operating days for which NO<sub>x</sub> data have not been obtained, including the reasons for not obtaining sufficient data and a description of the correction actions taken.
- 5.11.6 A list of the times when data were excluded from the 30-day NO<sub>x</sub> emission average calculations because of a unit start-up, shut-down, malfunction, or other reasons and the reasons for excluding data.
- 5.11.7 Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
- 5.11.8 Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.
- 5.11.9 Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3.
- 5.11.10 Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1.

[40 CFR 60.49b(g); PTC No. 029-00003, Section 4.4, 7/7/95]

5.12 The permittee shall monitor and record the cumulative volume of natural gas fuel consumption on a monthly basis and per each consecutive 12-month period.

[PTC No. 029-00003, Section 4.5, 7/7/95; IDAPA 58.01.01.322.06]

#### 5.13 Performance Tests

5.13.1 Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

[40 CFR 60.8(a)]

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- 5.13.2 Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator:
  - (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology,
  - (2) approves the use of an equivalent method,
  - (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance,
  - (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or
  - (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Clean Air Act.

[40 CFR 60.8(b)]

5.13.3 Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c)]

5.13.4 The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least seven days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

[40 CFR 60.8(d)]

- 5.13.5 The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
  - (1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

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- (2) Safe sampling platform(s).
- (3) Safe access to sampling platform(s).
- (4) Utilities for sampling and testing equipment.

[40 CFR 60.8(e)]

5.13.6 Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f)]

#### 5.14 Compliance with Standards

At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

5.15 For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in 40 CFR 60, nothing in 40 CFR 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[40 CFR 60.11(g)]

# 5.16 <u>Circumvention</u>

No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

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# 5.17 40 CFR 60, Subpart A, Monitoring Requirements

For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under Appendix B to 40 CFR 60, and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, Appendix F to 40 CFR 60, unless specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

[40 CFR 60.13(a)]

5.17.1 All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

[40 CFR 60.13(b)]

5.17.2 Owners and operators of a CEMS installed in accordance with the provisions of 40 CFR 60, must automatically check the zero (or low level value between zero and 20% of span value) and span (50 to 100% of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span must, as a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in Appendix B of 40 CFR 60. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified.

[40 CFR 60.13(d)]

- 5.17.3 Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
  - (1) In accordance with 40 CFR 60.13(e)(2), all continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

[40 CFR 60.13(e)]

5.17.4 All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of Appendix B of 40 CFR 60 shall be used.

[40 CFR 60.13(f)]

5.17.5 Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to six-minute averages and for continuous monitoring systems other than opacity to one-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each six-minute period. For continuous monitoring systems other than opacity, one-hour averages shall be computed from four or more data points equally spaced over each one-hour period. Data recorded during periods of continuous system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data

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averages computed under this paragraph. For owners and operators complying with the requirements in 40 CFR 60.7(f)(1) or (2), data averages must include any data recorded during periods of monitor breakdown or malfunction.

An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent  $O_2$  or ng of pollutant per J of heat input). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1% opacity).

[40 CFR 60.13(h)]

- 5.17.6 After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of 40 CFR 60 including, but not limited to the following:
  - (1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by 40 CFR 60 would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases
  - (2) Alternative monitoring requirements when the affected facility is infrequently operated.
  - (3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.
  - (4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.
  - (5) Alternative methods of converting pollutant concentration measurements to units of the standards.
  - (6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.
  - (7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.
  - (8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, Appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.
  - (9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.

[40 CFR 60.13(i)]

- 5.17.7 An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of 40 CFR 60, Appendix B may requested as follows:
  - (1) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50% of the applicable standard. A source owner or

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operator may petition the Administrator to waive the relative accuracy test in Section 8.4 of Performance Specification 2 and substitute the procedures in Section 16.0 if the results of a performance test conducted according to the requirements in 40 CFR 60.8 or other tests performed following the criteria in 40 CFR 60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50% of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in Section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50% of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the application emission limit is more stringent that NSPS).

(2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure, that the CEMS data indicate that the source emissions are approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70% of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70% of the level needed to meet the control efficiency requirement for seven consecutive, averaging periods as specified by the applicable regulation(s) (e.g., 40 CFR 60.45(g)(2) and (3), 40 CFR 60.73(e), and 40 CFR 60.84(e)). It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in Section 8.4 of Performance Specification 2.

[40 CFR 60.13(j)]

# Reporting

- 5.18 The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include:
  - (1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,
  - (2) In accordance with 40 CFR 60.49b(a)(3), the annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired, and,

[40 CFR 60.49b(a)]

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The owner or operator of each affected facility subject to sulfur dioxide, particulate matter, and/or nitrogen oxides emission limits under 40 CFR 60.42b, 40 CFR 60.43b, and 40 CFR 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B. The owner or operator of each affected facility described in 40 CFR 60.44b(j) or 40 CFR 60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

[40 CFR 60.49b(b)]

- 5.18.2 The owner or operator of each affected facility subject to the nitrogen oxides standard of 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of 40 CFR 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under 40 CFR 60.48b(g)(2) and the records to be maintained under 40 CFR 60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. The plan shall:
  - (1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxides emission rates (i.e., ng/J or lbs/million Btu heat input). Steam-generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);
  - (2) Include the data and information which the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions;
  - (3) Identify how these operating conditions, including steam generating unit load, will be monitored under 40 CFR 60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam- generating unit load, that will be maintained by the owner or operator under 40 CFR 60.49b(j).

If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.

[40 CFR 60.49b(c)]

5.18.3 The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

[40 CFR 60.49b(a)-(d)]

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- 5.19 The owner or operator of any affected facility in any category listed in Paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions which occurred during the reporting period.
  - (1) Any affected facility subject to the opacity standards under 40 CFR 60.43b(e) or to the operating parameter monitoring requirements under 40 CFR 60.13(i)(1).
  - (2) Any affected facility that is subject to the nitrogen oxides standard of 40 CFR 60.44b;
    - (i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less; or
    - (ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less, and is required to monitor nitrogen oxides emissions on a continuous basis under 40 CFR 60.48b(g)(1) or steam generating unit operating conditions under 40 CFR 60.48b(g)(2).
  - (3) Not applicable.
  - (4) For purposes of 40 CFR 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under 40 CFR 60.46b(e), which exceeds the applicable emission limits in 40 CFR 60.44b.

[40 CFR 60.49b(h)]

5.20 The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under 40 CFR 60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

[40 CFR 60.49b(i)]

# 5.21 Address

All requests, reports, applications, submittals, and other communications to the Administrator pursuant to 40 CFR 60 shall be submitted in duplicate to the appropriate Regional Office of the EPA to the attention of the Director of the Division indicated in the following list of EPA Regional Offices. Copies of all information required to be submitted to the EPA for applicable NSPS requirements, shall also be submitted to DEQ at the address given in Section 1 of this permit.

Region 10 Director, Air and Waste Management Division EPA 1200 Sixth Ave. Seattle, WA 98101

[40 CFR 60.4(a); IDAPA 58.01.01.322.08]

# 5.22 <u>Notification and Recordkeeping</u>

Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

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- (1) A notification of the date construction (or reconstruction as defined under 40 CFR 60.15 of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
- (2) (Reserved).
- (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
- (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
- (5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
- (6) A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of 40 CFR 60. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.
- (7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 CFR 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5) of 40 CFR 60. This notification shall be post-marked not less than 30 days prior to the date of the performance test.

  [40 CFR 60.7(a)]
- 5.22.1 Any owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 CFR 60.7(b)]

5.22.2 Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

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- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[40 CFR 60.7(c)]

- 5.22.3 The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
  - (1) If the total duration of excess emissions for the reporting period is less than 1% of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5% of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.
  - (2) If the total duration of excess emissions for the reporting period is 1% or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

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# Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

		Pollutant (Circle One: SO <sub>2</sub> / NO <sub>x</sub> / TRS	/ H <sub>2</sub> S / CO / Opacity)
		Reporting period dates: From	to
		Company:	
		Emission Limitation:	
		Address:	
		Monitor Manufacturer and Model No.:	
		Date of Latest CMS Certification or Audit:	
		Process Unit(s) Description:	
		Total source operating time in reporting per	iod <sup>1</sup> :
		Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>1</sup>
1.	Du	ration of excess emissions in reporting due to:	1. CMS downtime in reporting period period due to:
	a.	Startup/shutdown	a. Monitor equipment malfunctions
	b.	Control equipment problems	b. Non-Monitor equipment malfunctions
	c.	Process problems	c. Quality assurance calibration
	d.	Other known causes	d. Other known causes
	e.	Unknown causes	e. Unknown causes
2.	To	tal duration of excess emission	2. Total CMS downtime
3.	To	tal duration of excess emissions	3. [Total CMS Downtime] x (100)
	x (	100) [Total source operating time] % <sup>2</sup>	[Total source operating time] % <sup>2</sup>
	Fo do C	owntime is 5% or greater of the total operating time, both the FR 60.7(c) shall be submitted.	ons is 1% or greater of the total operating time or the total CMS e summary report form and the excess emission report described in 40 earter in CMS, process or controls. I certify that the
		Name	<u></u>
		Signature	<del></del>
		Title	<del></del>
		Date	<del></del>

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- 5.22.4 (1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:
  - (i) For one full year (e.g., four quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under 40 CFR 60 continually demonstrate that the facility is in compliance with the applicable standard;
  - (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60 Subpart A and the applicable standard; and
  - (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.
  - (2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.
  - (3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

[40 CFR 60.7(e)]

5.22.5 Any owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows;

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- (1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.
- (2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.
- (3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

[40 CFR 60.7(f)]

5.22.6 (g) If notification substantially similar to that in paragraph (a) of this section is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of Paragraph (a) of this section.

[40 CFR 60.7(g)]

5.22.7 (h) Individual subparts of 40 CFR 60 may include specific provisions which clarify or make inapplicable the provisions set forth in this section.

[40 CFR 60.7(h)]

#### PTC General Provisions

5.23 The permittee shall at all times (except as provided in the *Rules*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC No. 029-00003, General Provision B, 7/7/95]

5.24 The performance tests will be performed at the maximum production rate. If this maximum rate is not achieved during testing, the allowable production rate will be limited to the production rate attained during testing.

[PTC No. 029-00003, General Provision F, 7/7/95]

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# 6. WET PROCESS PHOSPHORIC ACID PLANT

# **Summary Description**

The following is a narrative description of the phosphoric acid plant regulated in this Tier I operating permit. This description is for informational purposes only.

Phosphate rock is fed, along with water, sulfuric acid, and recycle acid, into a series of seven cells: the first five being "reactors" and the last two being "digesters". Here it is mixed together and circulated while a chemical reaction takes place forming a slurry of phosphoric acid (approximately 30%  $P_2O_5$ ) and crystals of calcium sulfate known as phosphogypsum. The slurry is fed to a pair of circular pan filters where the 30% acid is separated from the gypsum. The phosphogypsum is slurried to an impoundment, commonly referred to as a "gyp stack." The 30% acid is sometimes sold at that concentration to other suppliers and users. However, most of the acid is concentrated using a series of eight evaporators which use steam heaters and vacuum systems with condensers to remove some of the water. This acid is stored in tanks and some of it is sold as Merchant Grade Acid. Some of it is further upgraded to super phosphoric acid (70%  $P_2O_5$ ) using special evaporators with natural gas-fired Therminol heaters to provide the necessary high temperature needed and is then stored in other tanks. The super phosphoric acid is further upgraded by removing impurities using three filters before it is loaded on trucks and railcars. Some of the intermediate grades of fertilizer are pumped to the granulation plant for use in dry granulated fertilizer production.

The purified phosphoric acid (PPA) process converts green acid (27% P<sub>2</sub>O<sub>5</sub>) produced by the phosphoric acid plant to food-grade PPA (61% P<sub>2</sub>O<sub>5</sub>) with a solvent extraction process. The PPA plant is not subject to the MACT requirements because it does not use methyl isobutyl ketone (MIBK) as a solvent in the process.

Table 6.1 describes the devices used to control emissions from the wet process phosphoric acid plant.

Table 6.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Source Code	Emission Unit(s) / Process(es)	Emission Control Device
S-Pa-1	Phosphoric acid process	Multi-stage horizontal cross-flow scrubber (A-Pa-1)
S-Pb-1	Superphosphoric acid process	Multi-stage horizontal cross-flow scrubber (A-Pb-1)
S-Pp-1	Purified phosphoric acid process	Sulfiding vent scrubber (A-Pp-1) (TAG. No. CP-4535101) Filter aid silo baghouse (A-Pp-2) (TAG. No. CP-5136101) Conditioning vent scrubber (A-Pp-3) (TAG. No. CP-4536101)
S-Pa-2a and 2b	Thermal fluid heaters	S-Pa-2a is equipped to control O <sub>2</sub> in combustion air

Table 6.2 contains only a summary of the requirements that apply to the phosphoric acid plant. Specific permit requirements are listed below Table 6.2.

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Table 6.2 APPLCIABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Monitoring and Recordkeeping Requirements
6.1	Fluoride emissions from wet process phosphoric acid line	6.750 gram / metric ton of equivalent P <sub>2</sub> O <sub>5</sub> feed (0.01350 lb/ton)	40 CFR 63.603(a) (2)	6.6, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.18, 6.19, 6.20, 6.21, 6.24, 6.28, 6.29, 6.30, 6.31, 6.32, 6.33, 6.34
6.2	Fluoride emissions from superphosphoric acid process line	4.350 gram/metric ton of equivalent P <sub>2</sub> O <sub>5</sub> feed (0.00870 lb/ton)	40 CFR 63.603(b) (2)	6.6, 6.11, 6.12, 6.13, 6.14, 6.15, 6.18, 6.19, 6.20, 6.21, 6.24, 6.28, 6.29, 6.30, 6.31, 6.33, 6.34
6.3	Nitrogen oxide emissions from superphosphoric Acid process line	Five tons per year	PTC No. P-040320	6.8, 6.23, 6.35
6.4	Radon -222	20 pCi/(m <sup>2</sup> -sec)	40 CFR 61.202	6.25, 6.26
6.5	Particulate matter	Process Weight Limitations	IDAPA 58.01.01.701	6.11, 6.12, 6.27
6.6	Emission from PPA process	Solvent emissions	PTC No. P-040320	6.10, 6.16, 6.17, 6.23

As determined by a pollutant-specific EPA reference method, DEQ apporved alternative, or as determined

by DEQ's emissions estimation methods used in the PTC application analysis.

#### Permit Limits / Standard Summary

# 6.1 Fluoride - Wet Process Phosphoric Acid Process Line Requirement

On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of 40 CFR 63, Subpart AA shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 6.750 gram/metric ton of equivalent  $P_2O_5$  feed (0.01350 lb/ton). 40 CFR 63.601 defines a wet process phosphoric acid process line as any process line manufacturing phosphoric acid by reacting phosphate rock and acid. The Conditioning Vent Scrubber System is part of the Phosphoric Acid Production Process.

[40 CFR 63.603(a); PTC No. P-040320, April 28, 2006]

#### 6.2 Fluoride - Superphosphoric Acid Process Line Requirement

On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of 40 CFR 63, Subpart AA shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 4.350 gram/metric ton of equivalent  $P_2O_5$  feed (0.00870 lb/ton). As required by 40 CFR 63.601 defines a superphosphoric acid process line as "any process line which concentrates wet-process phosphoric acid to 66% or greater  $P_2O_5$  by weight."

[40 CFR 63.603(b); PTC No. P-040320, April 28, 2006]

<sup>&</sup>lt;sup>2</sup>If any requirement in this permit conflicts with any requirement contained in 40 CFR 63, the requirement in 40 CFR 63 shall control.

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# 6.3 NO<sub>x</sub> - Superphosphoric Acid Oxidation Process

Emissions of NO<sub>x</sub> from the Superphosphoric Acid Oxidation Process shall not exceed five tons per any consecutive 12-month period.

[PTC No. P-040320, April 28, 2006]

#### 6.4 Radon - Phosphogypsum Stack

Each person who generates phosphogypsum shall place all phosphogypsum in stacks. Phosphogypsum may be removed from a phosphogypsum stack only as expressly provided by 40 CFR 61, Subpart R. After a phosphogypsum stack has become an inactive stack, the owner or operator shall assure that the stack does not emit more than 20 pCi/(m²-sec) (1.9 pCi/(ft²-sec)) of radon-222 into the air.

[40 CFR 61.202]

# 6.5 PM - Process Weight PM Emissions Limitations

No person shall emit into the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 9,250 lb/hr,

$$E = 0.045(Pw)^{0.6}$$

b. If PW is equal to or greater than 9,250 lb/hr,

$$E = 1.10(PW)^{0.25}$$

[IDAPA 58.01.01.701, 4/5/00]

# **Operating Requirements**

#### 6.6 Pressure Drops and Flow Rates for Wet Scrubbers

On or after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.606 is completed, the owner/operator using a wet scrubbing emission control system must maintain daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant to the requirements of 40 CFR 63.605(d)(1) or (2).

[40 CFR 63.604; PTC No. P-040320, April 28, 2006]

#### 6.7 P<sub>2</sub>O<sub>5</sub> Throughput - Superphosphoric Acid Process

The equivalent  $P_2O_5$  feed to the Superphosphoric Acid Process Line shall not exceed 345,000 tons per any consecutive 12-month period (T/yr).

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# 6.8 Superphosphoric Acid Oxidation Process NO, Control

When the Superphosphoric Acid Oxidation Process is operating, the permittee shall comply with the following for purposes of demonstrating compliance with the NO<sub>x</sub> emissions rate limit in Permit Condition 6.3:

- 6.8.1 The permittee shall install, maintain and operate catalytic control equipment to control emissions of NO<sub>x</sub> from the Superphosphoric Acid Oxidation Process.
- 6.8.2 The permittee shall install, calibrate, maintain, and operate equipment to continuously measure the NO<sub>x</sub> emissions rate, in pounds for each hour of operation and in tons per month, discharged to the atmosphere from the Superphosphoric Acid Oxidation Process stack.
- 6.8.3 The following NO<sub>x</sub> monitor information shall be recorded:
  - on a monthly basis, the NO<sub>x</sub> emissions rate shall be recorded in tons per month and tons per each consecutive 12-month period (T/yr);
  - all periods during which the NO<sub>x</sub> control equipment and/or the NO<sub>x</sub> monitor were not operational;
  - the results of all daily monitor calibrations.

The most recent five years' compilation of data shall be kept on-site, in a log, and shall be made available to DEQ representatives upon request.

- 6.8.4 Calibration of the continuous NO<sub>x</sub> monitor shall be maintained by performing the following:
  - calibrations at least daily using a reference gas; and
  - calibration in accordance with the manufacturer's specifications or as approved by DEQ.
- 6.8.5 The NO<sub>x</sub> control equipment and the equipment for measuring and recording the NO<sub>x</sub> emissions rate shall be maintained and operated according to manufacturer's specifications or as approved by DEQ. For this purpose, the following shall remain on site at all times and shall be made available to DEQ representatives upon request: a copy of the manufacturer's specifications and all DEQ approved operating, maintenance and calibration specifications; and the most recent five years compilation of NO<sub>x</sub> monitoring data and maintenance logs for the NO<sub>x</sub> monitoring equipment.

[PTC No. P-040320, April 28, 2006]

# 6.9 Evaporative Cooling Tower

No owner or operator shall introduce into any evaporative cooling tower any liquid effluent from any wet scrubbing device installed to control emissions from process equipment.

[40 CFR 63.603(e); PTC No. P-040320, April 28, 2006]

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#### 6.10 Solvent Usage in PPA Process

The owner or operator shall not use methyl isobutyl ketone (MIBK), or any HAP as defined in Section 112 of the Clean Air Act, as a solvent in the PPA process unless the owner or operator complies with the requirements in 40 CFR 63.603(f) and 40 CFR 63, Subpart H.

[40 CFR 63.603(e)]

# Monitoring & Recordkeeping Requirements

#### 6.11 Throughput Monitoring Systems

Each owner or operator of a new or existing wet-Process Phosphoric Acid Process Line, Superphosphoric Acid Process Line subject to the provisions of 40 CFR 63, Subpart AA shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of  $\pm$  5% over its operating range.

[40 CFR 63.605(a); PTC No. P-040320, April 28, 2006]

# 6.12 P<sub>2</sub>O<sub>5</sub> Throughput

Each owner or operator of a new or existing wet-Process Phosphoric Acid Process Line or Superphosphoric Acid Process Line subject to the provisions of 40 CFR 63, Subpart AA shall maintain a daily record of equivalent  $P_2O_5$  feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of 40 CFR 63.605(a) (Permit Condition 6.11) and then proceeding according to 40 CFR 63.606(c)(3) (Permit Condition 6.21.1(3)).

[40 CFR 63.605(b)(1); PTC No. P-040320, April 28, 2006]

#### 6.13 Pressure Drop Across Each Scrubber

Each owner or operator of a new or existing Wet-Process Phosphoric Acid Process Line, Superphosphoric Acid Process Line using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5\%$  over its operating range.

[40 CFR 63.605(c)(1); PTC No. P-040320, April 28, 2006]

#### 6.14 Liquid Flow Rate of Each Scrubber

Each owner or operator of a new or existing Wet-Process Phosphoric Acid Process Line, Superphosphoric Acid Process Line using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5\%$  over its operating range.

[40 CFR 63.605(c)(2); PTC No. P-040320, April 28, 2006]

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#### 6.15 Scrubber Pressure Drop and Liquid Flow Rate Ranges

Following the date on which the performance test required in 40 CFR 63.606 is completed, the owner or operator of a new or existing affected source using a wet scrubbing emission control system and subject to emissions limitations for total fluorides or particulate matter contained in 40 CFR 63, Subpart AA must establish allowable ranges for operating parameters using the methodology specified in either (1) or (2) of this section:

- The allowable range for the daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is  $\pm 20\%$  of the baseline average value determined as a requirement of 40 CFR 63.606(c)(4), (d)(4), or (e)(2). The Administrator retains the right to reduce the  $\pm 20\%$  adjustment to the baseline average values of operating ranges in those instances where performance test results indicate that a source's level of emissions is near the value of an applicable emissions standard, but, in no instance shall the adjustment be reduced to less than  $\pm 10\%$ . The owner or operator must notify the Administrator of the baseline average value and must notify the Administrator each time that the baseline value is changed as a result of the most recent performance test. When a source using the methodology of this paragraph is retested, the owner or operator shall determine whether new allowable ranges of baseline average values will be based upon the new performance test or (if the new performance test results are within the previously established range) whether there will be no change in the operating parameters derived from previous tests. When a source using the methodology of this paragraph is retested and the performance test results are submitted to the Administrator pursuant to 40 CFR 63.607(c)(1), 63.7(g)(1), and/or 63.10(d)(2), the owner or operator will indicate whether the operating range will be based on the new performance test or the previously established range. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.
- The owner or operator of any new or existing affected source shall establish, and provide to the **(2)** Administrator for approval, allowable ranges for the daily averages of the pressure drop across and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of assuring compliance with 40 CFR 63 Subpart AA. Allowable ranges may be based upon baseline average values recorded during previous performance tests using the test methods required in 40 CFR 63.606(c)(4), (d)(4), or (e)(2). As an alternative, the owner or operator can establish the allowable ranges using the results of performance tests conducted specifically for the purposes of this paragraph using the test methods required in 40 CFR 63, Subpart AA and established in the manner required in 40 CFR 63.606(c)(4), (d)(4), or (e)(2). The source shall certify that the control devices and processes have not been modified subsequent to the testing upon which the data used to establish the allowable ranges were obtained. The allowable ranges developed pursuant to the provisions of this paragraph must be submitted to the Administrator for approval. The owner or operator must request and obtain approval of the Administrator for changes to the allowable ranges. When a source using the methodology of this paragraph is retested, the owner or operator shall determine new allowable ranges of baseline average values unless the retest indicates no change in the operating parameters outside the previously established ranges. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test

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results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

[40 CFR 63.605(d); PTC No. P-040320, April 28, 2006]

# 6.16 Sulfiding Vent Scrubber (A-Pp-1) Pressure Drop and Liquid Flow Rate

- 6.16.1 The permittee shall install, calibrate, maintain, and operate, in accordance with manufacturer specifications, equipment to continuously measure the pressure differential across the scrubber and the scrubbing media flowrate to the scrubber.
- 6.16.2 The pressure drop across the scrubber and the scrubbing media flowrate to the scrubber shall be maintained within the manufacturer and O&M manual specifications when it is operated.

  Documentation of both the manufacturer and O&M manual operating pressure drop and scrubbing media flowrate specifications shall remain onsite at all times and shall be available to DEQ representatives upon request.
- 6.16.3 The permittee shall monitor and record the pressure drop across the scrubber and the scrubbing media flowrate to the scrubber on a daily basis when it is operated. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

  [PTC No. P-040320, April 28, 2006]

# 6.17 Filter Aid Silo Baghouse Pressure Drop

- 6.17.1 The permittee shall install, calibrate, maintain, and operate, in accordance with manufacturer specifications, equipment to continuously measure the pressure differential across the baghouse.
- 6.17.2 The pressure drop across the baghouse shall be maintained within the manufacturer and O&M manual specifications when it is operated. Documentation of both the manufacturer and O&M manual operating pressure drop specifications shall remain onsite at all times and shall be available to DEQ representatives upon request.
- 6.17.3 The permittee shall monitor and record the pressure drop across the baghouse on a weekly basis when it is operated. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

[PTC No. P-040320, April 28, 2006]

# 6.18 Performance Testing for Existing Units

On or before the applicable compliance date in 40 CFR 63.609 and once per annum thereafter, each owner or operator of a phosphoric acid manufacturing plant shall conduct a performance test to demonstrate compliance with the applicable emission standard for each existing Wet-Process Phosphoric Acid Process Line, Superphosphoric Acid Process Line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A and in 40 CFR 63.606.

[40 CFR 63.606(a)(1); PTC No. P-040320, April 28, 2006]

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#### 6.19 Performance Testing for New Units

As required by 40 CFR 63.7(a)(2) and once per annum thereafter, each owner or operator of a phosphoric acid manufacturing plant shall conduct a performance test to demonstrate compliance with the applicable emission standard for each new Wet-Process Phosphoric Acid Process Line, Superphosphoric Acid Process Line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A and in 40 CFR 63.606.

[40 CFR 63.606(a)(2); PTC No. P-040320, April 28, 2006]

# 6.20 Performance Test Methods

In conducting performance tests, each owner or operator of an affected source shall use as reference methods and procedures the test methods in 40 CFR 60, Appendix A, or other methods and procedures as specified in 40 CFR 63.606, except as provided in 40 CFR 63.7(f).

[40 CFR 63.606(b); PTC No. P-040320, April 28, 2006]

# 6.21 <u>Performance Testing - Fluorides</u>

Each owner or operator of a new Wet-Process Phosphoric Acid Process Line or Superphosphoric Acid Process Line shall determine compliance with the applicable total fluorides standards in 40 CFR 63.603, as specified in 6.1 and 6.2.

6.21.1 (1) The emission rate (E) of total fluorides shall be computed for each run using the following equation:

$$E = \left(\sum_{i=1}^{N} C_{si} Q_{sdi}\right) / (PK)$$

Where:

E = emission rate of total fluorides, g/metric ton (lb/ton) of equivalent  $P_2O_5$  feed.  $C_{si}$  = concentration of total fluorides from emission point "i," mg/dscm (mg/dscf).  $Q_{sdi}$  = volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).

N = number of emission points associated with the affected facility.

 $P = \text{equivalent } P_2O_5 \text{ feed rate, metric ton/hr (ton/hr)}.$ 

K = conversion factor, 1000 mg/g (453,600 mg/lb).

(2) Method 13A or 13B (40 CFR 60, Appendix A) shall be used to determine the total fluorides concentration (C<sub>si</sub>) and volumetric flow rate (Q<sub>sdi</sub>) of the effluent gas from each of the emission points. If Method 13B is used, the fusion of the filtered material described in Section 7.3.1.2 and the distillation of suitable aliquots of containers 1 and 2, described in Section 7.3.3 and 7.3.4 in Method 13 A, may be omitted. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

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(3) The equivalent P<sub>2</sub>O<sub>5</sub> feed rate (P) shall be computed using the following equation:

 $P = M_p R_p$ 

#### Where:

 $M_p = total mass flow rate of phosphorus-bearing feed, metric ton/hr (ton/hr).$   $R_p = P_2O_5$  content, decimal fraction.

- (i) The accountability system described in 40 CFR 63.605(a) and (b) shall be used to determine the mass flow rate (M<sub>p</sub>) of the phosphorus-bearing feed.
- (ii) The P<sub>2</sub>O<sub>5</sub> content (R<sub>p</sub>) of the feed shall be determined using as appropriate the following methods (incorporated by reference -- see 40 CFR 63.14) specified in the Book of Methods Used and Adopted By The Association Of Florida Phosphate Chemists, Seventh Edition 1991, where applicable:
  - (A) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample.
  - (B) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method A Volumetric Method.
  - (C) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method B Gravimetric Quimociac Method.
  - (D) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method C Spectrophotometric Method.
  - (E) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P<sub>2</sub>O<sub>5</sub>, Method A-Volumetric Method.
  - (F) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P<sub>2</sub>O<sub>5</sub>, Method B-Gravimetric Quimociac Method.
  - (G) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P<sub>2</sub>O<sub>5</sub>, Method C-Spectrophotometric Method.
- (4) To comply with 40 CFR 63.605(d)(1) or (2), the owner or operator shall use the monitoring systems in 40 CFR 63.605(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the total fluoride runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of 40 CFR 63.605(d)(1) or (2).

[40 CFR 63.606(c); PTC No. P-040320, April 28, 2006]

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#### 6.22 NSR Projected Emissions Records

The permittee shall maintain records and provide reports for the project addressed by PTC No. P-040320 in accordance with IDAPA 58.01.01.205.01 [40 CFR 52.21(r)(6) and (7)].

- 6.22.1 In accordance with 40 CFR 52.21(r)(6)(i), before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
  - (a) A description of the project;
  - (b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project (i.e., Superphosphoric Acid (SPA) Plant, Phosphoric Acid Plant, Boiler B-5, Thermal Oil Heaters, SPA Oxidizer, ore storage and transfer fugitive emissions, and gypsum stack fugitive emissions (including roadway dust)); and
  - (c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions.
- 6.22.2 In accordance with 40 CFR 52.21(r)(6)(iii), the owner or operator shall monitor the emissions of NO<sub>x</sub>, Fluoride, CO, PM<sub>10</sub>, PM, and VOC from the emissions units listed in Permit Condition 6.22.1; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change.
- 6.22.3 In accordance with 40 CFR 52.21(r)(6)(v), the owner or operator shall submit a report to DEQ and the EPA Administrator if the annual emissions, in tons per year, from the project identified under Permit Condition 6.22.1, exceed the baseline actual emissions (as documented and maintained pursuant to Permit Condition 6.22.1(c)), by a significant amount (as defined in 40 CFR 52.21(b)(23)) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Permit Condition 6.22.1(c). Such report shall be submitted to DEQ and the EPA Administrator within 60 days after the end of such year. In particular, in accordance with IDAPA 58.01.01.211.01, the permittee shall submit a report when each of the following conditions occur:
  - (a) When the annual combined emissions of NOx from all of the sources listed in Permit Condition 3.19.1 exceed 74.2 tons per year
  - (b) When the annual combined emissions of fluoride from all of the sources listed in Permit Condition 3.19.1 exceed 42.5 tons per year
  - (c) When the annual combined emissions of NOx from all of the sources listed in Permit Condition 3.19.1 exceed 67.4 tons per year
  - (d) When the annual combined emissions of fluoride from all of the sources listed in Permit Condition 3.19.1 exceed 41.8 tons per year

The information in Table 6.3 shall be used for purposes of complying with this requirement:

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# Table 6.3 40 CFR 52.21(r)(6)(v) INFORMATION FOR THE SPA PRODUCTION INCREASE PROJECT

TYPE OF EMISSIONS	NO, (TPY)	Fluoride (TPY)
Baseline Actual Emissions (BAE)	34.2	39.5
Significant defined by 52.21(b)(23)	40	3
Annual emission rate that would exceed BAE by a significant amount	74.2	42.5
Preconstruction Projection a	67.4	41.8

<sup>&</sup>lt;sup>a</sup>. Preconstruction projection is the same as projected actual emissions.

- 6.22.4 In accordance with 40 CFR 52.21(r)(6)(v), the report shall contain the following:
  - (a) The name, address and telephone number of the major stationary source;
  - (b) The annual emissions as calculated pursuant to paragraph (r)(6)(iii) of this section; and
  - (c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
- 6.22.5 In accordance with 40 CFR 52.21(r)(7), the owner or operator of the source shall make the information required to be documented and maintained pursuant to 40 CFR 52.21(r)(6) of this section available for review upon a request for inspection by the Administrator or the general public pursuant to the requirements contained in 40 CFR 70.4(b)(3)(viii) of this chapter.

[IDAPA 58.01.01.205, 4/6/05; 40 CFR 52.21(r)(6) and (7); PTC No. P-040320, April 28, 2006]

#### 6.23 Operations and Maintenance Manual Requirements

The permittee shall maintain and implement an O&M manual for the Superphosphoric Acid Oxidation Process Scrubber, Sulfiding Vent Scrubber, and the Filter Aid Silo Baghouse which describes the procedures that will be followed to comply with Permit Condition 6.35 and the air pollution control device requirements contained in this permit. Information for the Superphosphoric Acid Oxidation Process Scrubber shall be added to the O&M Manual within 60 days after issuance of this permit. The manual shall remain onsite at all times and shall be available to DEQ representatives upon request.

[PTC No. P-040320, April 28, 2006]

Each owner or operator subject to the requirements of 40 CFR 63, Subpart AA shall comply with the recordkeeping requirements in 40 CFR 63.10. Requirements are included in Appendix A of this permit.

[40 CFR 63.607(b)]

#### 6.25 Radon Monitoring from Phosphogypsum Stacks

(a) Within 60 days following the date on which a stack becomes an inactive stack, or within 90 days after the date on which 40 CFR 61, Subpart R first took effect if a stack was already inactive on that date, each owner or operator of an inactive phosphogypsum stack shall test the stack for radon-222 flux in accordance with the procedures described in 40 CFR 61, Appendix B, Method 115. EPA shall be notified at least 30 days prior to each such emissions test so that EPA may, at its option, observe the test. If meteorological conditions are such that a test cannot

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be properly conducted, then the owner or operator shall notify EPA and test as soon as conditions permit.

- (b) (i) Within 90 days after the testing is required, the owner or operator shall provide EPA with a report detailing the actions taken and the results of the radon-222 flux testing. Each report shall also include the following information:
  - (1) The name and location of the facility;
    - (ii) A list of the stacks at the facility including the size and dimensions of each stack;
    - (iii) The name of the person responsible for the operation of the facility and the name of the person preparing the report (if different);
    - (iv) A description of the control measures taken to decrease the radon flux from the source and any actions taken to insure the long te rm effectiveness of the control measures; and
    - (v) The results of the testing conducted, including the results of each measurement.
      - (2) Each report shall be signed and dated by a corporate officer in charge of the facility and contain the following declaration immediately above the signature line: "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on may inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. See, 18 U.S.C. 1001."
- (c) If the owner or operator of an inactive stack chooses to conduct measurements over a one year period as permitted by Method 115 in Appendix B to Part 61, within 90 days after the testing commences the owner or operator shall provide EPA with an initial report, including the results of the first measurement period and a schedule for all subsequent measurements. An additional report containing all the information in 40 CFR 61.203(b) shall be submitted within 90 days after completion of the final measurements.
- (d) If at any point an owner or operator of a stack once again uses an inactive stack for the disposal of phosphogypsum or for water management, the stack ceases to be in inactive status and the owner or operator must notify EPA in writing within 45 days. When the owner or operator ceases to use the stack for disposal of phosphogypsum or water management, the stack will once again become inactive and the owner or operator must satisfy again all testing and reporting requirements for inactive stacks.
- (e) If an owner or operator removes phosphogypsum from an inactive stack, the owner shall test the stack in accordance with the procedures described in 40 CFR 61, Appendix B, Method 115. The stack shall be tested within ninety days of the date that the owner or operator first removes phosphogypsum from the stack, and the test shall be repeated at least once during each calendar year that the owner or operator removes additional phosphogypsum from the stack. EPA shall be notified at least 30 days prior to an emissions test so that EPA may, at its option, observe the test. If meteorological conditions are such that a test cannot be properly conducted, then the owner shall notify EPA and test as soon as conditions permit. Within 90 days after completion of a test, the owner or operator shall provide EPA with a report detailing the actions taken and

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the results of the radon-222 flux testing. Each such report shall include all of the information specified by 40 CFR Part 61.203(b).

[40 CFR 61.203]

# 6.26 Recordkeeping for Phosphogypsum Stacks

Each owner or operator of a phosphogypsum stack must maintain records for each stack documenting the procedure used to verify compliance with the flux standard in 40 CFR 61.202, including all measurements, calculations, and analytical methods on which input parameters were based. The required documentation shall be sufficient to allow an independent auditor to verify the correctness of the determination made concerning compliance of the stack with flux standard.

[40 CFR 61.209]

# 6.27 <u>Performance Test - Particulate Matter</u>

The permittee shall conduct a compliance test on S-Pa-1, S-Pb-1, S-Pp-1, and S-Pa-2a and 2b in accordance with the procedures outlined in 40 CFR 60, Appendix A, Method 5, or a DEQ-approved alternative method, within 180 days of issuance of the permit. If the particulate matter emission rate measured in the initial compliance test is less than or equal to 75% of the emission standard in Permit Condition 6.5, no further testing shall be required during the permit term. The process weight measured during the compliance test shall be PW in the equation. If the particulate matter emission rate measured during the compliance test is greater than 75%, but less than or equal to 90%, of the emission standard in Permit Condition 6.5, a second test shall be required in the third year of the permit term. If the particulate matter emission rate measured during the compliance test is greater than 90% of the emission standard in Permit Condition 6.5, the permittee shall conduct a compliance test annually.

[IDAPA 58.01.01.322.09, 5/1/94]

# Reporting

# 6.28 MACT Performance Test Report

In accordance with 40 CFR 63.607(c), the owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 as follows:

#### 6.28.1 Performance Test Report

As required by 40 CFR 63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in 40 CFR 63.9.

[40 CFR 63.607(c)(1)]

#### 6.28.2 Excess Emissions Report

As required by 40 CFR 63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in 40 CFR 63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually

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and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved, as described in 40 CFR 63.10.

[40 CFR 63.607(c)(2)]

# 6.28.3 Summary Report

If the total duration of control system exceedances for the reporting period is less than 1% of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in 40 CFR 63.10, rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.

[40 CFR 63.607(c)(3)]

6.28.4 If the total duration of control system operating parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and excess emissions report.

[40 CFR 63.607(c)(4); PTC No. P-040320, April 28, 2006]

6.29 Each owner or operator subject to the requirements of 40 CFR 63, Subpart AA shall comply with the notification requirements in 40 CFR 63.9. Requirements are included in Appendix A of this permit.

[40 CFR 63.607(a); 40 CFR 63.627(a)]

# Phosphoric Acid Manufacturing Plant MACT Compliance Dates

Each owner or operator of an existing affected source at a phosphoric acid manufacturing plant shall achieve compliance with the requirements of 40 CFR 63, Subpart AA no later than June 10, 2002. Notwithstanding the requirements of 40 CFR 63.7(a)(2)(iii), each owner or operator of an existing source at an affected existing phosphoric acid manufacturing plant shall fulfill the applicable requirements of 40 CFR 63.606 no later than June 10, 2002.

[40 CFR 63.609(a)]

6.31 Each owner or operator of a phosphoric acid manufacturing plant that commences construction or reconstruction of an affected source after December 27, 1996 shall achieve compliance with the requirements of 40 CFR 63, Subpart AA upon startup of operations or by June 10, 1999, whichever is later.

[40 CFR 63.609(b)]

# **Evaporative Cooling Tower Certification Requirements**

Each owner or operator of an affected source subject to the evaporative cooling tower requirements in 40 CFR 63.603(e) (Permit Condition 6.9) must certify to the Administrator annually that he/she has complied with the requirements contained in that section.

[40 CFR 63.603(e)]

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# Phosphoric Acid Manufacturing Plant Exemption From New Source Performance Standards

Any affected source subject to the provisions of 40 CFR 63, Subpart AA is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart T, Subpart U, or Subpart NN. To be exempt, a source must have a current operating permit pursuant to Title V of the Act and the source must be in compliance with all requirements of 40 CFR 63, Subpart AA. For each affected source, this exemption is effective upon the date that the owner or operator demonstrates to the Administrator that the requirements of 40 CFR 63.604, 63.605 and 63.606 have been met.

[40 CFR 63.610]

# Applicability of MACT General Provisions

6.34 The owner or operator shall comply with the requirements of the general provisions in 40 CFR 63, Subpart A as shown in Appendix A to 40 CFR 63, Subpart AA. Requirements are included in Appendix A of this permit.

[40 CFR 63.608; PTC No. P-040320, April 28, 2006]

#### PTC General Provisions

6.35 The permittee shall at all times (except as provided in the *Rules*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC No. P-040320, General Provision 2, April 28, 2006]

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# 7. RESERVED